

## Amy M. Marcarelli

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<http://www.mtu.edu/biological/departments/faculty-staff/faculty/marcarelli>

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### **Appointments**

- 2015 – present      *Associate Professor*, Michigan Technological University, Department of Biological Sciences, Houghton, MI.
- 2009 – 2015        *Assistant Professor*, Michigan Technological University, Department of Biological Sciences, Houghton, MI.

### **Professional Preparation and Education**

- 2006 – 2009        *Postdoctoral researcher*, Idaho State University Stream Ecology Center and Center for Ecological Research and Education, Pocatello, ID.
- 2006                *Ph. D., Ecology*, Utah State University, Logan, UT.
- 2000                *B.A., Biology*, Colgate University, Hamilton, NY. Magna cum laude, Honors in Biology, Distinction in the Liberal Arts Core Curriculum.

### **Current research interests**

- The “yin and yang” of nitrogen fixation and denitrification in stream ecosystems.
- Nutrient processing and stream-lake interactions in the Great Lakes.
- Consequences of stream restoration for ecosystem processes.
- Resource subsidies and energy flow through food webs and ecosystems.

### **Research Grants** (13 external awards totaling \$2.1M since 2009; 5 Michigan Tech internal awards totaling \$121K)

- 2015 – 2020    National Science Foundation  
Title: CAREER: Yin and yang - is there a balance between nitrogen fixation and denitrification in riverine ecosystems?  
PI: A. Marcarelli, \$813,956 (including supplements)
- 2017 - 2018    Research Excellence Fund – Research Seed, Michigan Tech  
Title: REF-IE: Acquisition of a SEAL AQ-2 Discrete water chemistry analyzer to facilitate low-detection level water chemistry at Michigan Tech  
Lead PI: A. Marcarelli, Co-PI: E. Kane, S. Techtmann, N. Urban, \$36,752

- 2016 – 2018 US Environmental Protection Agency Great Lakes Restoration Initiative  
Title: Les Cheneaux Islands Eurasian Watermilfoil Control  
Lead PI: C. Brooks Co-PIs: A. Marcarelli, C. Huckins, A. Grimm, \$470,407
- 2015 – 2017 Michigan Invasive Species Grants Program  
Title: Innovative and multifaceted control of invasive Eurasian and hybrid watermilfoil using integrative pest management principles  
Lead PI: C. Huckins, Co-PIs: A. Marcarelli, E. Hersch-Green, C. Brooks, \$332,000
- 2015 – 2016 Research Excellence Fund – Infrastructure Enhancement, Michigan Tech  
Title: Remote data acquisition from forests, streams and wildlife for research and instruction  
Lead PI: A. Burton, Co-PIs: R. Froese, A. Marcarelli, Y. Dickinson, J. Wagenbrenner, \$35,000
- 2014 – 2016 US Environmental Protection Agency Great Lakes Restoration Initiative  
Title: Arresting the spread of Eurasian Watermilfoil in Lake Superior  
Lead PI: C. Huckins, Co-PIs: A. Marcarelli, G. Meadows, R. Chimner, \$499,887
- 2013 – 2016 Les Cheneaux Watershed Council  
Title: Phytoplankton enumeration for Les Cheneaux water quality studies  
PI: A. Marcarelli, co-PI: Gary Fahnenstiel, \$5,388
- 2011 – 2016 USDA Forest Service Northern Research Station  
Title: Changes in Ecosystem Function Associated with Sand Accumulation in a Lake Superior Tributary  
Lead PI: A. Marcarelli, Co-PI: C. Huckins, \$35,633
- 2013 – 2015 University of Michigan Water Center  
Title: Monitoring stream ecosystem function responses to stamp sand stabilization in tributaries of Lake Superior  
Lead PI: A. Marcarelli, Co-PIs: C. Huckins, \$49,958
- 2013 – 2015 Huron Mountain Wildlife Foundation  
Title: Regional comparative survey of stream fish and ecosystem processes of the Huron Mountains region  
Lead PI: C. Huckins, Co-PI: A. Marcarelli, \$8,365
- 2013 – 2014 Shoshone-Bannock Tribes  
Title: River metabolism responses to salmon nutrient enrichment treatments in the Salmon River subbasin  
PI: A. Marcarelli, \$4,540
- 2012 – 2014 National Fish and Wildlife Foundation: Bring Back the Natives  
Title: Salmon Trout River Coaster Brook Trout Restoration (MI)  
Lead PI: C. Huckins, Co-PIs: A. Marcarelli, S. Eggert (US Forest Service), E. Baker (MI DNRE), \$59,999
- 2012 – 2013 Research Excellence Fund – Research Seed, Michigan Tech

- Title: REF-RS: Climate controls on nutrient processing and export in a first order tributary of Lake Superior  
Lead PI: A. Marcarelli, Co-PI: E. Kane, \$16,000
- 2012 – 2013 Huron Mountain Wildlife Foundation  
Title: Ecosystem Response to Sediment Accumulation and Riverine Geomorphology at Reach, River and Regional Scales: Continuing Studies in the Salmon Trout River  
Lead PI: A. Marcarelli, Co-PI: C. Huckins, \$7,500
- 2011 – 2012 Huron Mountain Wildlife Foundation  
Title: Linkages among Stream Habitat, Ecosystem Conditions, and Temporal and Spatial Variation in Fluvial Fish Assemblages in the Salmon Trout River  
Lead PI: C. Huckins, Co-PIs: A. Marcarelli, S. Eggert (US Forest Service), \$11,600
- 2010 – 2012 Shoshone-Bannock Tribes  
Title: Nutrient Limitation, Autotrophic Response, and River Metabolism Responses to Salmon Nutrient Enrichment Treatments in the Salmon River Subbasin  
PI: A. Marcarelli, \$71,108
- 2011 Century II Campaign Endowed Equipment Fund, Michigan Tech  
Title: Ion Chromatography System for the Determination of Cation and Anion Concentrations in Water  
Lead PI: R. Datta, Co-PIs: A. Marcarelli, S. Green, \$5,000
- 2010 – 2011 Research Excellence Fund – Research Seed, Michigan Tech  
Title: REF-RS: Food webs from the “bottom-up”: short and long-term drivers of basal ecosystem processes in the Salmon Trout River  
Lead PI: A. Marcarelli, Co-PI: C. Huckins, \$28,443
- 2010 – 2011 Huron Mountain Wildlife Foundation  
Title: Changes in Ecosystem Function Associated with Sand Accumulation in the Salmon Trout River, Marquette County Michigan  
Lead PI: C. Huckins, Co-PIs: A. Marcarelli, S. Eggert and A. Timm (US Forest Service), \$5,500
- 2008 – 2009 U.S. Geological Survey, Idaho Water Sciences Center  
Title: Effects of nutrient enrichment in Idaho stream ecosystems  
Lead PI: A. Marcarelli, Co-PIs: A. Ray, C. Baxter, \$6,942
- 2007 – 2009 Inland Northwest Research Alliance  
Title: Coupling management of water quality and quantity: How do hydrology and biological activity interact to control nutrient concentration and export in an impaired Intermountain watershed?  
Lead PI: A. Marcarelli, Co-PIs: R. Van Kirk, C. Baxter, \$62,500
- 2007 – 2008 Faculty Research Council, Idaho State University  
Title: Like day and night: diel cycles of nutrients may have consequences for water quality management in the Portneuf River and beyond  
Co-PIs: A. Marcarelli, C. Baxter, \$5,000

- 2004 – 2005 National Science Foundation Doctoral Dissertation Improvement Grant  
Title: Temperature and nutrient control of cyanobacterial nitrogen fixation in subalpine drainages: a mesocosm experiment  
Co-PIs: A. Marcarelli, W. Wurtsbaugh, \$10,939
- 2002 – 2003 Ecology Center Graduate Research Grant, Utah State University  
Title: Cyanobacterial nitrogen fixation in subalpine watersheds: impact of macronutrients, \$3,200
- 2001 – 2002 Ecology Center Graduate Research Grant, Utah State University  
Title: Cyanobacterial nitrogen fixation in subalpine watersheds: spatial variations and controls, \$2,600

### **Teaching Experience**

- 2013 – present Instructor, *Principles of Ecology* (BL 3400), Michigan Tech
- 2011 – present Instructor, *Limnology* (BL 4450), Michigan Tech (offered alternate years)
- 2010 – present Instructor, *The Scientific Profession* (BL 5025), Michigan Tech (ranked in top 10% of instruction on campus based on student reviews, fall 2010, 2011, 2013, 2014, spring 2016)
- 2015 Co-instructor, *Stream Ecology and Fish Biology* (BL4447/5447), Michigan Tech (offered alternate years)
- 2015 Co-instructor, *Lake Superior Exploration* (BL5421), Michigan Tech University (2-week summer course)
- 2014 Co-instructor, *Lake Ecology and Fish Biology* (BL4442/5442), Michigan Tech (offered alternate years)
- 2013 Co-instructor, *Analysis of Biological Data* (BL4470), Michigan Tech
- 2011 – 2013 Instructor, *Perspectives on Inquiry* (UN 1001), Michigan Tech (alternate years)
- 2010 – 2012 Instructor, *Ecosystem Ecology* (BL 4461/5461), Michigan Tech (ranked in top 10% of instruction on campus based on student reviews, spring 2012) (alternate years)
- 2009 – 2011 Co-instructor, *Research Methods in Aquatic Ecology* (BL 4455/5455), Michigan Tech (half-semester field course, alternate years)
- 2010 Instructor, *Senior Essay* (BL 4510), Michigan Tech
- 2006 Co-instructor, *Aquatic Ecosystem Ecology* (BIOL 658), Idaho State
- 2006 Instructor, *Freshwater Ecology* (WATS 4500), Utah State

2005	Instructor, <i>Freshwater Ecology Practicum</i> (WATS 4510), Utah State
2004 – 2005	Co-Instructor, <i>Water Quality &amp; Pollution</i> (WATS 4530/6530), Utah State
2000 – 2004	Teaching assistant, <i>Freshwater Ecology Practicum</i> (WATS 4510), Utah State (awarded TA of the year for College of Natural Resources, 2004)
1999 – 2000	Undergraduate teaching assistant, <i>Introduction to Biology</i> (BIOL101 & 102), Colgate University

## **Mentoring**

### *Postdoctoral Researchers*

2014 – 2015	Dr. Kevyn Juneau (co-advised with Casey Huckins)
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### *Undergraduate mentoring – independent research projects*

2017	Molly Warner (NSF REU)
2017	Sarah Frederick
2016 – 2017	Michelle Kelly (NSF REU)
2014 – 2015	Ryan Van Goethem (MTU SURF award winner)
2012 – 2015	Jade Ortiz (MTU SURF award winner)
2012 – 2013	Josh Papacek
2011 – 2013	Jeffery Kiiskila
2010 – 2012	Nicole Matthias
2011	Rhianne Chittenden (MiCUP intern)

### *Current graduate students – primary advisor (\* indicates partially or fully supported on external funds)*

2015 – present	Chris Adams	PhD – Biological Sciences (co-advised with Casey Huckins)
2014 – present	Colin Brooks	PhD – Biological Sciences
2015 – present	Erin Eberhard*	MS 2017, PhD – Biological Sciences
2016 – present	Kevin Nevorski*	PhD – Biological Sciences
2016 – present	Ryan Van Goethem*	MS – Biological Sciences

### *Completed graduate students – primary advisor*

2011 – 2015	Ashley Coble*	PhD – Biological Sciences
2012 – 2014	James Olson*	MS – Biological Sciences
2012 – 2014	Timothy Veverica*	MS – Forest Ecology and Management (co-advised with Evan Kane)
2010 – 2012	Jonathan Ebel*	MS – Biological Sciences

### *Graduate students – committee member*

2016 – present	Brian Danhoff	PhD – Biological Sciences
2013 – present	Martin Hobmeier	PhD – Biological Sciences
2017 – present	Stefan Hupperts	PhD – Forest Science
2015 – present	Karl Meingast	PhD – Forest Science
2013 – 2017	Anthony Matthys	PhD – Biological Sciences
2009 – 2014	Stephanie Ogren	PhD – Biological Sciences
2008 – 2014	Scott Collins	PhD – Biological Sciences (Idaho State Univ.)

2010 – 2013	Anna Hess	PhD – Forest Science
2009 – 2013	Foad Yousef	PhD – Biological Sciences
2009 – 2013	Carley Kratz	PhD – Forest Science
2009 – 2012	Meagan Harless	PhD – Biological Sciences
2016 – present	Carmen Leguizamon	MS – Biological Sciences
2012 – 2017	David Fenlon	MS – Peace Corp Master's International
2015 – 2016	Bradley Wells	MS – Peace Corp Master's International
2011 – 2015	Lindsey Perry	MS – Peace Corp Master's International
2013 – 2015	Alex Bales	MS – Biological Sciences
2014 – 2015	Jennie Tyrrell	MS – Civil Engineering
2013 – 2014	Justina Silva	MS – Forest Ecology and Management
2011 – 2013	Alistair Smith	MS – Forest Ecology and Management
2011 – 2012	Renn Lambert	MS – Environmental Engineering
2010 – 2011	Christine Jones	MS – Forestry
2009 – 2011	Danielle Haak	MS – Biological Sciences
2009 – 2011	Mickey Jarvi	MS – Forest Ecology and Management
2009 – 2011	Daniel Yeboah	MS – Applied Ecology

**Publications** (30 total, h-index = 14 from Google Scholar, 13 Jun 2017)

\* indicates graduate student co-author, † indicates undergraduate student co-author; first author is also corresponding author unless otherwise noted with §; order of authorship indicates level of contribution

*Peer-reviewed journal articles and book chapters*

Dodds WK, Burgin AJ, **Marcarelli AM**, Strauss EA. 2017. Nitrogen transformations, pp 173-196 in *Methods in Stream Ecology, 3<sup>rd</sup> ed*, Ed. Hauer FR, Lamberti GA. Elsevier.

Olson JC\*, Marcarelli AM§, Timm AL, Eggert SL, Kolka RK. 2017. Evaluating the effects of culvert designs on ecosystem processes in northern Wisconsin streams. *River Research and Applications* 33: 777–787. DOI: 10.1002/rra.3121

Bump JK, Bergman BG\*, Schrank AJ, **Marcarelli AM**, Kane ES, Risch A, Schuetz M. 2017. Nutrient release from moose bioturbation in aquatic ecosystems. *Oikos* 126: 389-397. DOI:10.1111/oik.03591 **Impact factor: 3.586**

Baker MA, Arp CD, Goodman KJ, **Marcarelli AM**, Wurtsbaugh WA. 2016. Stream-lake interaction: understanding a coupled hydro-ecological system, pp 321-348 in *Streams in a Changing Environment*, Ed. Jones J, Stanley E. Academic Press.

Coble AA\*, **Marcarelli AM**, Kane ES, Huckins CJ. 2016. Uptake of ammonium and soluble reactive phosphorus in forested streams: influence of dissolved organic matter composition. *Biogeochemistry* 131:355-372. DOI: 10.1007/s10533-016-0284-7 **Impact factor: 3.407**

Coble AA\*, **Marcarelli AM**, Kane ES, Stottlemeyer JR, Toczydlowski D. 2016. Temporal patterns of dissolved organic matter biodegradability are similar across three rivers of varying size. *Journal of Geophysical Research - Biogeosciences* 121:1617-1631. DOI:10.1002/2015JG003218 **Impact factor: 3.318**

- Collins SF\*, Baxter CV, **Marcarelli AM**, Wipfli MS. 2016. Effects of experimentally added salmon subsidies on resident fishes via direct and indirect pathways. *Ecosphere* 7:e01248. DOI:10.1002/ecs2.1248
- Veverica TJ\*, Kane ES, **Marcarelli AM**, Green SA. 2016. Ionic liquid extraction unveils previously occluded humic-bound iron in peat pore water. *Soil Science Society of America Journal* 80:771-782. DOI:10.2136/sssaj2015.10.0377
- Coble AA\*, **Marcarelli AM**, Kane ES. 2015. Ammonium and glucose amendments stimulate dissolved organic matter mineralization in a Lake Superior tributary. *Journal of Great Lakes Research* 41:801–807. DOI:10.1016/j.jglr.2015.05.015
- Collins SF\*, **Marcarelli AM**, Baxter CV, Wipfli MS. 2015. A critical assessment of the ecological assumptions underpinning compensatory mitigation of salmon-derived nutrients. *Environmental Management* 56:571-586. DOI:10.1007/s00267-015-0538-5
- Marcarelli AM**, Huckins CJ, Eggert SL. 2015. Sand aggradation alters biofilm standing crop and metabolism in a low-gradient Lake Superior tributary. *Journal of Great Lakes Research* 41:1052-1059. DOI:10.1016/j.jglr.2015.09.004
- Ebel JD\*, **Marcarelli AM**<sup>§</sup>, Kohler AK. 2014. Biofilm nutrient limitation, standing crop, and metabolism responses to experimental application of salmon carcass analog in Idaho streams. *Canadian Journal of Fisheries and Aquatic Sciences* 12:1796-1804. DOI:10.1139/cjfas-2014-0266
- Marcarelli AM**, Baxter CV, Wipfli MS. 2014. Nutrient additions to mitigate for loss of Pacific salmon: consequences for stream biofilm and nutrient dynamics. *Ecosphere* 5:69. DOI:10.1890/ES13-00366.1
- Ray AM, Mebane CA, Raben F<sup>†</sup>, Irvine KM, **Marcarelli AM**. 2014. A combined macrophyte-epiphyte bioassay for assessing nutrient enrichment. *Environmental Monitoring and Assessment* 186:4081-4096. DOI:10.1007/s10661-014-3682-0
- Bechtold HA\*, **Marcarelli AM**, Baxter CV, Inouye RS. 2012. Effects of N, P and organic carbon on stream biofilm nutrient limitation and uptake in a semi-arid watershed. *Limnology and Oceanography* 57:1544–1554. DOI:10.4319/lo.2012.57.5.1544  
**Impact factor: 3.615**
- Mineau MM\*, Baxter CV, **Marcarelli AM**, Minshall GW. 2012. An invasive riparian tree reduces stream ecosystem efficiency via a recalcitrant organic matter subsidy. *Ecology* 93:1501–1508. DOI:10.1890/11-1700.1 **Impact factor: 5.000**
- Scott JT, **Marcarelli AM**. 2012. Cyanobacteria in freshwater benthic environments, pp 271–289 in *The Ecology of Cyanobacteria II: Their Diversity in Time and Space*, Ed. Whitton BA. Springer, Dordrecht. DOI:10.1007/978-94-007-3855-3\_9
- Hopkins JM\*, **Marcarelli AM**, Bechtold HA\*. 2011. Ecosystem structure and function are complementary measures of water quality in a polluted, spring-influence river. *Water Air and Soil Pollution* 214:409–421. DOI:10.1007/s11270-010-0432-y

- Marcarelli AM**, Baxter CV, Mineau MM\*, Hall RO. 2011. Quantity and quality: unifying food web and ecosystem perspectives on the role of resource subsidies in freshwaters. *Ecology* 92:1215–1225. DOI:10.1890/10-2240.1 **Impact factor: 5.000**
- Mineau MM\*, Baxter CV, **Marcarelli AM**. 2011. A non-native riparian tree (*Elaeagnus angustifolia*) changes nutrient dynamics in streams. *Ecosystems* 14:353–365. DOI:10.1007/s10021-011-9415-0 **Impact factor: 3.531**
- Marcarelli AM**, Van Kirk RW, Baxter CV. 2010. Predicting effects of hydrologic alteration and climate change on ecosystem metabolism in a western U.S. river. *Ecological Applications* 20:2081–2088. DOI:10.1890/09-2364.1 **Impact factor: 4.126**
- Marcarelli AM\***, Wurtsbaugh WA. 2009. Habitat and seasonal variations in nitrogen fixation in linked lake-stream ecosystems. *Biogeochemistry* 94: 95–110. DOI:10.1007/s10533-009-9311-2 **Impact factor: 3.730**
- Marcarelli AM**, Bechtold HA\*, Rugenski AT\*, Inouye RS. 2009. Nutrient limitation of biofilm biomass and metabolism in the Upper Snake River basin, southeast Idaho, USA. *Hydrobiologia* 620: 63–76. DOI:10.1007/s10750-008-9615-6
- Marcarelli AM\***, Baker MA, Wurtsbaugh WA. 2008. Is in-stream nitrogen fixation an important nitrogen source for benthic communities and stream ecosystems? *Journal of the North American Benthological Society* 27:186–211. DOI:10.1899/07-027.1
- Rugenski AT\*, **Marcarelli AM**, Bechtold HA\*, Inouye RS. 2008. Effects of temperature and concentration on nutrient release rates from nutrient diffusing substrates. *Journal of the North American Benthological Society* 27:52–57. DOI:10.1899/07-046R1.1
- Marcarelli AM\***, Wurtsbaugh WA. 2007. Effects of upstream lakes and nutrient limitation on periphyton biomass and nitrogen fixation in oligotrophic, subalpine streams. *Freshwater Biology* 52: 2211–2225. DOI:10.1111/j.1365-2427.2007.01851.x
- Myers AK<sup>†</sup>, **Marcarelli AM\***, Arp CD\*, Baker MA, Wurtsbaugh WA. 2007. Disruptions of stream sediment size and stability by lakes in mountain watersheds: potential effects on periphyton biomass. *Journal of the North American Benthological Society* 26: 390–400. DOI:10.1899/06-086.1
- Marcarelli AM\***, Wurtsbaugh WA. 2006. Temperature and nutrient supply interact to control nitrogen fixation in oligotrophic streams: An experimental examination. *Limnology and Oceanography* 51: 2278–2289. DOI:10.4319/lo.2006.51.5.2278 **Impact factor: 3.615**
- Marcarelli AM\***, Wurtsbaugh WA, Griset O<sup>†</sup>. 2006. Salinity controls plankton response to nutrient enrichment in Farmington Bay, Great Salt Lake, Utah. *Canadian Journal of Fisheries and Aquatic Sciences* 63: 2236–2248. DOI:10.1139/f06-113
- Hoham RW, **Marcarelli AM**<sup>†</sup>, Rogers HS<sup>†</sup>, Ragan MD<sup>†</sup>, Petre BM<sup>†</sup>, Ungerer MD<sup>†</sup>, Barnes JM<sup>†</sup>, Francis DO<sup>†</sup>. 2000. The importance of light and photoperiod in sexual reproduction and geographical distribution in the green snow alga, *Chloromonas* sp.-D (Chlorophyceae, Volvocales). *Hydrological Processes* 14: 3309–3321. DOI:10.1002/1099-1085(20001230)14:18<3309::AID-HYP200>3.0.CO;2-R



*In review and revision*

Ortiz JE<sup>†</sup>, **Marcarelli AM**, Juneau KJ, Huckins CJ. Invasive *Myriophyllum spicatum* and nutrients interact to influence algal assemblages. *Freshwater Science*. In revision, to be submitted Aug 2017.

*Dissertations and Theses*

**Marcarelli AM**. 2006. Cyanobacterial nitrogen fixation in subalpine, oligotrophic watersheds: Spatial and temporal variations. PhD Dissertation, Department of Aquatic Watershed and Earth Resources, Utah State University, Logan, UT.

**Presentations** (presentations since 2009 listed; \* indicates graduate student co-author, † indicates undergraduate student co-author; note that first author listed was presenting author)

*Invited presentations*

- 2017 **Marcarelli AM**, Coble A, Kane ES, Nevorski K\*, Brooks C, Meingast K\*, Huckins CJ, Toczydlowski D, Stottlemeyer JR. Of Small Streams and Great Lakes: Carbon and Nutrient Cycling in Linked Terrestrial-Stream-Lake Networks. American Water Resources Association Spring Specialty Conference, Snowbird, UT.
- 2017 **Marcarelli AM**. Food web and ecosystem connections between forests and streams. The Michigan Society of American Foresters Spring Meeting, Marquette, MI.
- 2016 **Marcarelli AM**. Old paradigms and new frameworks for understanding nitrogen fixation in stream ecosystems. University of Wyoming Brown Bag Seminar Series, Laramie, WY.
- 2016 **Marcarelli AM**. “Never peak too soon” – or, what I learned from Wayne Wurtsbaugh. Lecture for Wurtsbaugh retirement celebration, Utah State University, Logan, UT.
- 2016 **Marcarelli AM**. Small streams and Great Lakes. Carnegie Museum Seminar Series, "Environmental Awareness in the Keweenaw: Lake Superior Futures", Houghton, MI.
- 2015 Baxter CV, Collins SF, **Marcarelli AM**, Bellmore JR. More than bags of nutrients: weighing ecological and social costs of losing migratory fishes versus the management paradigm of compensatory mitigation. Ecological Society of America Annual Meeting, Baltimore, MD.
- 2015 **Marcarelli AM**. Ecosystem approaches to understand stream restoration. Environmental Engineering Seminar Series, Michigan Technological University, Houghton, MI.
- 2015 **Marcarelli AM**. Water chemistry and nutrient cycling in tributaries of Lake Superior. Lake Superior Environmental Monitoring Collaborative Meeting, hosted by the USEPA at the Great Lakes Research Center, Houghton, MI.
- 2014 Olson JO\*, **Marcarelli AM**, Eggert S, Timm A, Kolka R. Do stream simulation culvert designs improve ecosystem function? A case study in northern Wisconsin.

- International Conference on Engineering and Ecohydrology for Fish Passage, Madison, WI.
- 2014 Eggert S, King N, Olson JO\*, **Marcarelli AM**, Higgins D, Reinecki S, Timm A, Kolka R. Benefits of stream simulation design culverts on biological productivity. International Conference on Engineering and Ecohydrology for Fish Passage, Madison, WI.
- 2014 **Marcarelli AM**. Ecosystem approaches to understand stream restoration. Department of Biological Sciences Seminar, Michigan Technological University, Houghton, MI.
- 2014 **Marcarelli AM**. Ecosystem approaches to understand stream restoration. Department of Biological Sciences Seminar, Idaho State University, Pocatello, ID.
- 2014 **Marcarelli AM**. Ecosystem approaches to understand stream restoration. Department of Watershed Sciences Seminar, Utah State University, Logan, UT.
- 2013 Collins SF\*, Baxter CV, **Marcarelli AM**, Wipfli MS. Spatiotemporal complexity in stream food web responses to salmon subsidies. Western Division American Fisheries Society Annual Meeting, Boise, ID.
- 2013 Kohler AE, Richardson DP, **Marcarelli AM**, Ebel JD\*, Keeley ER. Three years of experimental carbon and nutrient additions in upper Salmon River Basin streams using salmon carcass analogs: what have we learned so far? Western Division American Fisheries Society Annual Meeting, Boise, ID.
- 2013 **Marcarelli AM**, Ebel JD\*, Baxter CV, Kohler AE, Collins SF\*, Wipfli MS. Integrating ecosystem science into fisheries-targeted nutrient enhancement programs aimed to mitigate for the loss of Pacific salmon. Western Division American Fisheries Society Annual Meeting, Boise, ID.
- 2013 Panel discussion: **Marcarelli AM**, Cross W, Brandt D, Servheen G, Ireland K, Baxter CV, Ross TJ. Silver Bullet or so much fertilizer? Synthesis and dialogue regarding the science and management of nutrient amendments as mitigation tools. Western Division American Fisheries Society Annual Meeting, Boise, ID.
- 2012 Baxter CV, Benjamin J\*, Mineau MM\*, Fausch K, Lepori F, **Marcarelli AM**, Minshall, G W. Emerging lessons: invasive species effects that cross habitat boundaries. Ecological Society of America Annual Meeting, Portland, OR.
- 2012 Baxter CV, Benjamin J\*, Mineau MM\*, Fausch K, Lepori F, **Marcarelli AM**, Minshall GW. Emerging lessons: invasive species effects that cross habitat boundaries. Society for Freshwater Science Annual Meeting, Louisville, KY.
- 2011 Collins SF\*, Baxter CV, **Marcarelli AM**, Wipfli MS. Effects of Salmon Carcass and Analog Additions on Resident Trout in Idaho. American Fisheries Society Annual Meeting, Seattle, WA.
- 2011 Servheen G, Wipfli MS, Baxter CV, Felicetti L, **Marcarelli AM**, Kavanagh K. Managing and Mitigating Salmon-Derived Nutrients: Are Analogs Salmon Avatars? American Fisheries Society Annual Meeting, Seattle, WA.

- 2011 **Marcarelli AM**, Baxter CV, Wipfli MS, Kohler AE, Collins SF\*, Ebel JD\*, Servheen G. Salmon nutrient mitigation effects on bottom-up processes in streams: lessons from large-scale experiments in central Idaho. American Fisheries Society Annual Meeting, Seattle, WA.
- 2010 **Marcarelli AM**. Complex ecosystem responses to interacting stressors: a collaborative study of human effects on the Portneuf River, Idaho. Department of Biological Sciences Seminar, Michigan Technological University, Houghton, MI.
- 2010 **Marcarelli AM**. Cross-boundary effects on energy and nutrient flow in mountain streams. Chemistry Department Seminar, Michigan Technological University, Houghton, MI.
- 2009 **Marcarelli AM**. Organisms, energy and nutrient flow in streams. Department Seminar, Tomakomai Experimental Forest, Field Science Center for Northern Biosphere, Hokkaido University, Japan.
- 2009 **Marcarelli AM**. Organisms, energy and nutrient flow in streams. Department Seminar, Department of Biological Sciences, Michigan Technological University, Houghton MI.

*Contributed presentations at national and international meetings*

- 2017 Zallek T\*, Huckins CJ, **Marcarelli AM**, Brooks C, Hersch-Green E. Herbicide sensitivity, hybrid zones, genetic diversity, and selection in invasive Eurasian watermilfoil (*Myriophyllum spicatum*). Ecological Society of America Annual Meeting, Portland OR.
- 2017 Eberhard EK\*, **Marcarelli AM**, Baxter CV. Do nitrogen fixation and denitrification co-occur across a gradient of stream N concentrations in a western watershed? Society for Freshwater Science Annual Meeting, Raleigh NC.
- 2017 Kelly M<sup>†</sup>, Nevorski K\*, **Marcarelli AM**. Within-reach variation in nitrification and denitrification rates in streams of the Upper Peninsula of Michigan. Society for Freshwater Science Annual Meeting, Raleigh NC.
- 2017 Leguizamon C\*, Huckins CJ, **Marcarelli AM**, Hersch-Green E. Impacts of invasive Eurasian watermilfoil on littoral communities of the Upper Great Lakes Region. Society for Freshwater Science Annual Meeting, Raleigh NC.
- 2017 **Marcarelli AM**, Baxter CV, Benjamin J, Miyake Y, Fausch KD, Murakami M, Nakano S. Merging ecosystem and food-web understanding of the consequences of terrestrial subsidies in a forested stream. Society for Freshwater Science Annual Meeting, Raleigh NC.
- 2017 Nevorski KC\*, **Marcarelli AM**, Huckins CJ, Eggert S. Long-term open water metabolism estimates associated with sediment restoration in a low-gradient river. Society for Freshwater Science Annual Meeting, Raleigh NC.

- 2017 Van Goethem RR\*, **Marcarelli AM**, Huckins CJ, Juneau JJ. Legacy disturbance in a lake littoral zone: effects of mining residue on the composition of macrophyte communities. Society for Freshwater Science Annual Meeting, Raleigh NC.
- 2017 Huckins CJ, Hersch-Green E, **Marcarelli AM**, Grimm AG, Brooks CN, Zallek T\*, Leguizamon CM\*, Van Goethem RR\*, Heilman M, Willis B. Eurasian Watermilfoil Response to Herbicide Control and Predictions of its Dispersal. International Association for Great Lakes Research Annual Conference on Great Lakes Research, Detroit MI.
- 2017 Brooks CN\*, Grimm AG, Huckins CJ, **Marcarelli AM**, Van Goethem R\*, Dobson R. Using Advanced Mapping Tools to Help Monitor Eurasian Watermilfoil for Improved Treatment Options. International Association for Great Lakes Research Annual Conference on Great Lakes Research, Detroit MI.
- 2016 Brooks CN\*, Grimm AG, Huckins CJ, **Marcarelli AM**. Development of a spectral-based algorithm for mapping and monitoring of Eurasian watermilfoil (*Myriophyllum spicatum*) in the Great Lakes region from an unmanned aerial vehicle platform. Ecological Society of America Annual Meeting, Ft Lauderdale, FL.
- 2016 **Marcarelli AM**, Eberhard EK\*, Baxter CV, Welter JR, Scott JT, Fulweiler RW. Old paradigms and new frameworks for understanding nitrogen fixation in stream ecosystems. Ecological Society of America Annual Meeting, Ft Lauderdale, FL.
- 2016 Brooks CN\*, Grimm AG, Huckins CJ, **Marcarelli AM**, Van Goethem RR\*, Dobson RJ. Evaluating the spread and control of Eurasian watermilfoil through remote sensing technologies. International Association for Great Lakes Research Annual Conference on Great Lakes Research, Guelph, ON, Canada.
- 2016 Eberhard EK\*, **Marcarelli AM**, Ortiz JE†, Baxter CV. Do N<sub>2</sub> fixation and denitrification cooccur across a gradient of stream N concentrations in a western watershed? Association for the Sciences of Limnology and Oceanography Summer Meeting, Santa Fe, NM.
- 2016 Van Goethem RR\*, **Marcarelli AM**, Juneau KJ, Huckins CJ. Legacy disturbance effects in a lake littoral zone: effects of stamp sands on structure of macrophyte communities in the Keweenaw waterway of MI. Association for the Sciences of Limnology and Oceanography Summer Meeting, Santa Fe, NM.
- 2015 Juneau KJ, **Marcarelli AM**, Huckins CJ, Chimner RA, Brooks CN. Environmental Response of a Lake Superior coastal waterway to Eurasian watermilfoil management. Ecological Society of America Annual Meeting, Baltimore, MD.
- 2015 Juneau KJ, Huckins CJ, **Marcarelli AM**, Chimner RA, Brooks CN, Xue P, Meadows GA. Ecological Response to Eurasian Watermilfoil Management in a Lake Superior Coastal Waterway. International Association for Great Lakes Research Annual Conference on Great Lakes Research, Burlington, VT.
- 2015 **Marcarelli AM**, Huckins CJ, Coble AA\*, Olson JC\*, Nicholas G, Aho R. Stream ecosystem process responses to stamp sand stabilization in tributaries of Lake Superior. International Association for Great Lakes Research Annual Conference on Great Lakes Research, Burlington, VT.

- 2015 Ortiz JE<sup>†</sup>, **Marcarelli AM**, Juneau KJ, Huckins CJ. Invasive *Myriophyllum spicatum* and Nutrients Interact to Influence Phytoplankton Communities. Society for Freshwater Science Annual Meeting, Milwaukee, WI.
- 2015 Veverica TJ\*, Kane ES, Marcarelli AM, Green SA. Ionic liquid extraction unveils previously occluded humic-bound iron in peat porewater. American Geophysical Union Annual Meeting, San Francisco, CA.
- 2014 Matthys A\*, Huckins C, **Marcarelli AM**, Baker EA. Fine Sediment Removal Greatly Increases Fish Selection of Restored Habitat during Restoration of a Sandy River. American Fisheries Society Annual Meeting, Quebec City, Quebec, Canada.
- 2014 Lunch CK, Goodman K, Holtgrieve G, Hall RO, **Marcarelli AM**, Mineau MM, Bales J, Bernot M, Roberts BJ. Modeling long-term continuous stream metabolism across the continent: NEON opportunities and approaches. Ecological Society of America Annual Meeting, Sacramento, CA.
- 2014 Olson JO\*, **Marcarelli AM**, Eggert S, Timm A, Kolka R. Assessing the impact of culvert design on three ecosystem functions in northern Wisconsin streams. Conference on Ecological and Ecosystem Restoration, New Orleans, LA.
- 2014 Timm A, Eggert S, **Marcarelli AM**, Olson J\*, Kolka R, Higgins D, Reinecki S. Fish habitat and biomass at stream simulation design culverts on the Chequamegon-Nicolet National Forest. International Conference on Engineering and Ecohydrology for Fish Passage, Madison, WI.
- 2014 Coble AA\*, **Marcarelli AM**, Kane ES, Huckins CJ. Spatial and temporal measurements of N, P, and C uptake in small Lake Superior tributaries. Joint Aquatic Sciences Meeting, Portland, OR.
- 2014 Collins SF\*, Baxter CV, **Marcarelli AM**, Wipfli MS, Florin S\*, Felicetti L, Servheen G. Direct and Indirect Responses of Stream and Riparian Organisms to Experimental Subsidies of Salmon. Joint Aquatic Sciences Meeting, Portland, OR.
- 2014 **Marcarelli AM**, Fulweiler RW, Scott JT, Welter JR. Nitrogen fixation along the freshwater to marine continuum: state of the science and research needs. Joint Aquatic Sciences Meeting, Portland, OR.
- 2014 Ortiz JE<sup>†</sup>, **Marcarelli AM**, Fahnenstiel GL, Smith RA. Impact of nutrient loading and Eurasian Watermilfoil on phytoplankton communities among channels of the Les Cheneaux Islands, Lake Huron. Joint Aquatic Sciences Meeting, Portland, OR.
- 2013 Goodman K, Lunch CK, Baxter CV, Hall RO, Holtgrieve GW, Roberts BJ, **Marcarelli AM**, Tank JL. Challenges and opportunities of long-term continuous metabolism. American Geophysical Union Annual Meeting, San Francisco, CA.
- 2013 Coble AA\*, **Marcarelli AM**, Huckins CJ. Nitrogen and phosphorus, but not carbon, are quickly taken up in streams: assessing variability in nutrient uptake across six Lake Superior tributaries. Ecological Society of America Annual Meeting, Minneapolis, MN.

- 2013 Goodman K, Hall RO, Baxter CV, **Marcarelli AM**, Roberts BJ, Tank JL, Lunch CK, Berukoff S, Powell H. Challenges and opportunities of long-term continuous metabolism. Ecological Society of America Annual Meeting, Minneapolis, MN.
- 2013 **Marcarelli AM**, Baxter CV, Benjamin JR, Murakami M. Does quality trump quantity? Ecosystem-level consequences of subsidies in a forested stream. Ecological Society of America Annual Meeting, Minneapolis, MN.
- 2013 **Marcarelli AM**, Collins SF\*, Baxter CV, Huckins CJ. How can ecosystem ecology learn from and inform fisheries restoration? IGNITE talk. Ecological Society of America Annual Meeting, Minneapolis, MN.
- 2013 Matthys AD\*, Huckins CJ, **Marcarelli AM**. Embeddedness: a context dependent driver of fish habitat preference. Ecological Society of America Annual Meeting, Minneapolis, MN.
- 2013 Olson JC\*, **Marcarelli AM**, Timm A, Eggert SL, Kolka RK. Evaluating the impact of culvert designs on hydrologic connectivity and nutrient uptake in northern Wisconsin streams. Ecological Society of America Annual Meeting, Minneapolis, MN.
- 2013 Wurtsbaugh WA, **Marcarelli AM**, Boyer GL. Harmful algal blooms in the Great Salt Lake (Utah): Salinity, Nutrient and Top-Down Controls. Association for the Advancement of Limnology and Oceanography Aquatic Sciences Meeting, New Orleans, LA.
- 2012 Coble AA\*, **Marcarelli AM**. Seasonal variation in nutrient uptake in a 1st-order tributary of Lake Superior and implications for climate change. American Geophysical Union Fall Meeting, San Francisco, CA.
- 2012 Ebel JD\*, **Marcarelli AM**, Kohler AE. Biofilm responses to nutrient enrichment using salmon carcass analog in central Idaho streams. Ecological Society of America Annual Meeting, Portland, OR.
- 2012 Eggert S, Timm A, King NR, **Marcarelli AM**, Kolka R, Higgins D, Reinecke S. Food Web Responses to Stream Simulation Design of Road-Stream Crossings: Moving Beyond Aquatic Organism Passage. American Fisheries Society Annual Meeting, Minneapolis-St. Paul, MN.
- 2012 King NR, Eggert SL, **Marcarelli AM**, Huckins CJ, Ebel JD\*, Matthys AD\*, Kolka RK. Detrital breakdown and macroinvertebrate communities affected by sedimentation in a low-gradient tributary to Lake Superior. Society for Freshwater Science Annual Meeting, Louisville, KY.
- 2011 Collins SF\*, Baxter CV, **Marcarelli AM**, Wipfli MS. Effects of salmon carcass and analog additions on resident trout in Idaho" North American Benthological Society Annual Meeting, Providence, RI.
- 2011 Ebel JD\*, **Marcarelli AM**, Kohler A. Biofilm response to nutrient mitigation using salmon carcass analog in Central Idaho Streams. North American Benthological Society Annual Meeting, Providence, RI.

- 2011 Eggert S, Huckins CJ, **Marcarelli AM**. Effects of sand accumulation on invertebrate communities of the Salmon Trout River, Michigan. North American Benthological Society Annual Meeting, Providence, RI.
- 2011 Huckins CJ, **Marcarelli AM**, Eggert S, Matthys T\*. Multi-scale variation in salmonid abundance in the Salmon Trout River, Michigan and associations with sand accumulation. North American Benthological Society Annual Meeting, Providence, RI.
- 2011 **Marcarelli AM**, Eggert S, Huckins CJ. Variation in organic matter production, storage and processing associated with sand accumulation in the Salmon Trout River, Michigan. North American Benthological Society Annual Meeting, Providence, RI.
- 2010 Wipfli MS, **Marcarelli AM**, Kavanaugh KL, Servheen G, Collins SF\*, Felicetti LA, Florin ST\*, Baxter CV, Wheeler T\*. Mitigating for the loss of marine nutrients from salmon: ecological effects of salmon carcass and analog additions to headwater aquatic and terrestrial systems in Idaho, USA. Ecological Society of America Annual Meeting, Pittsburg, PA.
- 2010 Bechtold HA\*, Baxter CV, **Marcarelli AM**, Inouye RS. Are nutrient loading effects on stream nutrient processing driven by shifts in biofilm community dynamics? American Society of Limnology and Oceanography and the North American Benthological Society Joint Meeting, Santa Fe, NM.
- 2010 Collins SF\*, Baxter CV, **Marcarelli AM**, Wipfli MS. Responses of riparian insects and spiders to experimental additions of salmon carcasses. American Society of Limnology and Oceanography and the North American Benthological Society Joint Meeting, Santa Fe, NM.
- 2010 **Marcarelli AM**, Baxter CV, Murakami M. Quantity and quality: the role of terrestrial subsidies in food web pathways and ecosystem metabolism in Horonai Stream. American Society of Limnology and Oceanography and the North American Benthological Society Joint Meeting, Santa Fe, NM.
- 2010 Mineau MM\*, Baxter CV, **Marcarelli AM**, Minshall GW. Retentive or leaky: How do stream ecosystems respond to carbon and nitrogen subsidies from non-native Russian olive (*Elaeagnus angustifolia*)? American Society of Limnology and Oceanography and the North American Benthological Society Joint Meeting, Santa Fe, NM.
- 2009 Wurtsbaugh WA, **Marcarelli AM**, Boyer GL. Extreme eutrophication and cyanotoxin levels in Farmington Bay, a polluted embayment of the Great Salt Lake, Utah. Society of Environmental Toxicology and Chemistry North America Meeting, New Orleans, LA.
- 2009 **Marcarelli AM**, Baxter CV, Collins SF\*, Wipfli MS. Short-term ecosystem responses to experimental salmon carcass and analog additions in headwater streams. Ecological Society of America Meeting, Albuquerque, NM.
- 2009 Bechtold HA\*, Baxter CV, **Marcarelli AM**, Inouye RS. Difference in nutrient uptake (N, P, carbon) and organic matter processing rates in relation to land use intensity. North American Benthological Society Meeting, Grand Rapids, MI.

- 2009 Collins SF\*, Baxter CV, **Marcarelli AM**, Wipfli MS. Riparian insect response to experimental in-stream salmon additions. North American Benthological Society Meeting, Grand Rapids, MI.
- 2009 **Marcarelli AM**, Van Kirk RW, Baxter CV. Present and future effects of agricultural practices and climate change on coupled hydrologic and biologic regimes in a western U.S. river. North American Benthological Society Meeting, Grand Rapids, MI.
- 2009 Martin RA, **Marcarelli AM**, Baxter CV, Collins SF\*, Wipfli MS. Nutrient limitation and uptake response to experimental salmon additions in Idaho headwater streams. North American Benthological Society Meeting, Grand Rapids, MI.
- 2009 Mineau MM\*, Baxter CV, **Marcarelli AM**, Leffler AJ, Kasahara T. In-stream nutrient processing is altered due to a nitrogen subsidy caused by Russian olive, a non-native riparian tree. North American Benthological Society Meeting, Grand Rapids, MI.

*Contributed presentations at regional and local meetings*

- 2017 Adams C, Huckins CJ, **Marcarelli AM**, Zorn T, Quinlan H. Evaluating fish movements in the Pilgrim River and implications of recent harvest restrictions intended to increase coaster brook trout populations. Michigan Chapter of the American Fisheries Society Annual Meeting, Mackinaw City, MI.
- 2017 **Marcarelli AM**, Kohler AE, Ebel JD\*, Collins SF, Baxter CV, Huckins CJ. Ecosystem science bolsters fisheries management: Lessons from stream restoration projects in Michigan and Idaho. Michigan Chapter of the American Fisheries Society Annual Meeting, Mackinaw City, MI.
- 2016 **Marcarelli AM**, Huckins CJ, Juneau KJ, Brooks C\*, Chimner RA, Hersch-Green E, Meadows GA. Integrated management of nonnative and hybrid Eurasian Watermilfoil in the Portage Waterway of the Upper Peninsula of Michigan. Midwest Aquatic Plant Management Society 36th Annual Meeting, Grand Rapids, MI.
- 2016 Van Goethem RR\*, **Marcarelli AM**, Juneau KJ, Huckins CJ. Legacy disturbance effects in a lake littoral zone: effects of stamp sands on structure of macrophyte communities in the Keweenaw waterway of MI. Midwest Aquatic Plant Management Society 36th Annual Meeting, Grand Rapids, MI.
- 2016 Huckins CJ, **Marcarelli AM**, Juneau KJ, Chimner RA, Brooks CN, Xue P, Meadows GA, Hersch-Green E. Collaboration and challenges with prevention, control, and management of invasive Eurasian Watermilfoil. 76th Midwest Fish and Wildlife Conference, Grand Rapids, MI.
- 2015 Juneau KJ, Huckins CJ, **Marcarelli AM**. Innovative and Multifaceted Control of Invasive Eurasian and Hybrid Watermilfoil Using Integrated Pest Management Principles. Sixth Annual Northern Great Lakes Invasive Species Conference, Marquette, MI.



- 2014 Juneau, K, Huckins C, **Marcarelli AM**, Chimner R, Brooks C, Xue P, Meadows G. Arresting the spread of Eurasian watermilfoil (*Myriophyllum spicatum*) in the Keweenaw Waterway. Science of the Northwoods Conference, Boulder Junction, Wisconsin.
- 2014 **Marcarelli AM**, Huckins CJ, Nicholas G, Aho R. Monitoring stream ecosystem function responses to sand stabilization in tributaries of Lake Superior. Water Center Grants Annual Meeting, Graham Sustainability Institute, University of Michigan, Ann Arbor, MI.
- 2014 Collins SF\*, Baxter CV, Felicetti L, Florin S\*, **Marcarelli AM**, Wipfli MS, Servheen G. Direct and Indirect Responses of Stream and Riparian Organisms to Artificial Additions of Salmon Carcasses and Salmon Analog Pellets are Mediated by Subsidy Form and Duration.", Idaho Chapter of the American Fisheries Society Annual Meeting, Idaho Falls, Idaho.
- 2014 Eggert S, Timm A, King N, Olson J, **Marcarelli AM**, Kolka R, Higgins D, Reinecke S. Improved stream food web function associated with stream simulation design culverts in northern Great Lakes streams. Minnesota Lake Superior Watershed Stream Science Symposium, Duluth, MN.
- 2014 **Marcarelli AM**. Ecosystem responses to restoration activities in Lake Superior tributaries. Meeting of the Lake Superior Technical Committee - Great Lakes Fisheries Commission, Great Lakes Research Center, Houghton, MI.
- 2012 Wurtsbaugh WA, **Marcarelli AM**, Boyer G. Eutrophication in the Great Salt Lake, Utah. Great Salt Lake Issues Forum, Friends of Great Salt Lake, Salt Lake City, UT.
- 2012 Collins SF\*, Baxter CV, **Marcarelli AM**. A critical assessment of the ecological assumptions underpinning compensatory mitigation of salmon derived nutrients" Idaho Chapter of the American Fisheries Society Annual Meeting, Coeur d'Alene, ID.
- 2012 Richardson DP, Kohler AE, **Marcarelli AM**, Ebel J\*, Campbell S\*, Keeley ER. How do stream food webs respond to the addition of salmon carcass analogs in Idaho streams? Idaho Chapter of the American Fisheries Society Annual Meeting, Coeur d'Alene, ID.
- 2012 Eggert SL, **Marcarelli AM**, Huckins CJ, King N, Ebel JD\*, Matthys AD\*, Kolka RK. Effects of sand accumulation on food webs of a coaster brook trout tributary to Lake Superior. Forestry, Wildlife and Natural Resource Research Review, Cloquet, MN.
- 2011 Baxter CV, Wipfli MS, **Marcarelli AM**, Kavanaugh KL, Servheen G, Collins SF\*, Felicetti LA, Florin ST\*, Wheeler T\*, Noble-Stuen A\*. Mitigating for the loss of marine nutrients from salmon: ecological effects of salmon carcass and analog additions to headwater aquatic and terrestrial systems in Idaho, USA. Idaho Chapter of the American Fisheries Society Annual Meeting, Boise, ID.
- 2011 Bell A<sup>†</sup>, Collins SF\*, Baxter CV, **Marcarelli AM**, Wipfli MS. Resident trout consumption of salmon carcass and analog added to tributaries of the North Fork Boise River, Idaho. Idaho Chapter of the American Fisheries Society Annual Meeting, Boise, ID.

- 2011 Collins SF\*, Baxter CV, **Marcarelli AM**, Wipfli MS. Effects of experimental salmon carcass and analog additions on resident trout growth rates, abundance, and production. Idaho Chapter of the American Fisheries Society Annual Meeting, Boise, ID.
- 2010 Eggert S, Kolka R, Brandt N, Rutten L, Huckins CJ, **Marcarelli AM**. The role of research in aquatic habitat protection and restoration on National Forests and protected areas in the Midwest. Midwest Fish and Wildlife Conference, Minneapolis, MN.
- 2010 **Marcarelli AM**, Huckins CJ, Eggert S. Multi-scale drivers of ecosystem production in the Salmon Trout River. Science of the Northwoods Conference, Boulder Junction, Wisconsin.
- 2010 Eggert S, Huckins CJ, **Marcarelli AM**, Mercier P<sup>†</sup>. Using functional methods to monitor habitat rehabilitation of the Salmon Trout River, Michigan. US Forest Service Eastern Region Stream and Lake Riparian Restoration using Large Wood Materials Workshop, Eagle River, WI.
- 2010 Collins SF\*, Baxter CV, **Marcarelli AM**, Wipfli MS. Responses of riparian insects and spiders to experimental additions of salmon carcasses and analog. Western Division American Fisheries Society Annual Meeting, Salt Lake City, UT.
- 2010 Collins SF\*, Baxter CV, **Marcarelli AM**, Wipfli MS. Riparian insect response to experimental salmon carcass additions to Idaho streams. Idaho Chapter of the American Fisheries Society Annual Meeting, Pocatello, ID.
- 2009 Mebane CA, Ray AM, **Marcarelli AM**, Raben F<sup>†</sup>. Influence of nutrients and other factors on agricultural stream ecosystems: integrating bioassessment and experimental information. 20<sup>th</sup> annual Northwest Bioassessment Workgroup Meeting, McCall, Idaho.
- 2009 Mineau MM\*, Baxter CV, **Marcarelli AM**, Leffler AJ, Kasahara T. In-stream nutrient processing is altered due to a nitrogen subsidy caused by Russian olive, a non-native riparian tree. Utah State University Spring Runoff Conference, Logan, UT.
- 2009 Collins SF\*, Baxter CV, **Marcarelli AM**, Wipfli MS. There's no fish like dead fish: how do salmon additions influence resident fish growth? Idaho Chapter of the American Fisheries Society Annual Meeting, Boise, ID.
- 2009 **Marcarelli AM**, Baxter CV, Collins SF\*, Martin RA, Wipfli MS. Short-term periphyton and nutrient responses to experimental salmon additions in headwater streams. Idaho Chapter of the American Fisheries Society Annual Meeting, Boise, ID.

## **Professional Service and Outreach**

### ***Michigan Technological University***

#### *Departmental Service - Standing committees*

- 2017 – Present Curriculum Committee, Department of Biological Sciences  
2015 – Present Promotion and Tenure Committee, Department of Biological Sciences

2015 – 2017; 2009 – 2013  
2013 – 2017  
2011 – 2015

Graduate committee, Department of Biological Sciences  
Safety Committee, Department of Biological Sciences  
Infrastructure and Operations (chair), Department of Biological Sciences

*Departmental Service - Temporary or Ad-Hoc Committees*

2012 – Present  
2016  
2013 – 2014  
2010 – 2011  
2009 – 2010

Ecology interdisciplinary degree committee  
Toxicologist Hiring Committee, Department of Biological Sciences  
Microbiologist Hiring Committee, Department of Biological Sciences  
Plant Biology Hiring Committee, Department of Biological Sciences  
Ad-hoc Safety committee to address field trip safety, Department of Biological Sciences

*University-Level Committees*

2015 – Present  
2015 – 2017  
2013 – 2016  
2013  
2011 – 2013  
2009 – 2012

Workshop facilitator, Diversity Literacy Online Workshops, The ADVANCE Initiative at Michigan Tech  
Internal Advocate, Early Career Management program, Office of Institutional Equity and Inclusion  
Great Lakes Research Center, Advisory Board Member  
External Representative, Hydrologist Hiring Committee, School of Forest Resources and Environmental Science  
Center for Water and Society, Advisory Board Member  
Graduate Faculty Council – Representative 2009–2011, Alternate 2011–2012

*One-time service activities*

2017  
2017  
2017  
2016 – 2017  
2013 – 2017  
2013 – 2017  
2011 – 2017  
2016  
2011 – 2015  
2011 – 2015  
2014  
2014  
2013  
2011, 2013  
2010, 2013  
2010, 2012

Presenter, "CAREER Proposal Development Session", lunch session hosted by the VPR's Research Development office  
Reviewer, Research Excellence Fund proposals  
Judge for Undergraduate Research Symposium  
Presenter, "Responsible Conduct of Research for Undergraduate Researchers", workshop hosted by the Pavlis Honors College  
Reviewer, Summer Undergraduate Research Fellowship proposals  
Guest Speaker, Department of Biological Sciences High School Visit program  
Judge for Ecosystem Science Center Graduate Research Forum  
Presenter on using Twitter for research marketing at Research Development Day, hosted by the VPR's Research Development office  
Guest Speaker, Department of Biological Sciences First-Year Orientation  
Judge for Center for Water and Society World Water Day student poster competition; organized judging in 2013  
Presenter, "Peer Review", for the "Ethics, Integrity, and Responsible Conduct of Research Workshop for Graduate Students" organized by the Office of Compliance, Integrity and Safety  
Judge for Graduate Student Government Research Colloquium  
Panelist, Graduate Student Research Grants, Ecosystem Science Center  
Faculty Marshall at Graduation, Department of Biological Sciences  
Guest Speaker, Center for Water and Society World Water Day  
Guest Speaker, Presidential Council of Alumnae

2012 Guest Speaker, College of Science and Arts student orientation  
2012 Guest Speaker, Department of Biological Sciences 50<sup>th</sup> anniversary picnic  
2012 Judge for Graduate Student Government Research Colloquium  
2010 – 2011 Cognate Reviewer for Strategic Faculty Hiring Initiative (3 reviews in 2010, > 20 reviews in 2011)  
2011 Discussion leader for ESC Coffee, Ecosystem Science Center  
2011 Facilitator, Graduate Student Orientation  
2011 Faculty Mentor, MiCUP program, Center for Institutional Diversity and Inclusion  
2010 Guest Speaker, Biology Week Research Night  
2009 Host/reviewer for Leading Scholars Scholarship program

### **Editorial and Review Activities**

2013 – present Associate Editor, *Freshwater Science* (serving 2<sup>nd</sup> 3 year term; 6-8 manuscripts handled per year)  
2010 – 2017 NSF panel member, DEB Population and Community Ecology, Ecosystem Science (1 panel each 2010, 2011, 2013, 2014, 2017)  
2016 – 2017 External Promotion & Tenure Reviewer (1 completed in each 2016 and 2017)  
2013 Ad-hoc reviewer: Ecological Stewardship Plan for the Huron Mountain Club  
2007 – 2016 Ad-hoc proposal reviewer: NSF (DEB: Population and Community Ecology, and Ecosystem Sciences, and DES: Instrumentation and Facilities, Postdoctoral Fellowship), U.S.-Israel Binational Science Foundation, Wisconsin Sea Grant, Washington Sea Grant, University of Wisconsin Water Resources Institute, Wisconsin Groundwater Coordinating Council, Austrian Science Fund  
2006 – present Manuscript reviewer: *Aquat Ecol*, *Biogeochemistry*, *Can J Fish Aquat Sci*, *Ecology*, *Ecol Appl*, *Ecol Lett*, *Ecol Monogr*, *Ecosphere*, *Ecosystems*, *Environ Manag*, *Freshwater Biol*, *Fund Appl Limnol*, *Global Change Biol*, *Hydrobiologia*, *Hydrolog Proc*, *J North Am Benthol Soc*, *Lake Reserv Res Manag*, *Limnol Oceanogr*, *Limnol Oceanogr: Methods*, *Mar Freshwat Res*, *PLOS ONE*

### **Professional Society Service**

2017 – Present Vice President of Society for Freshwater Science  
2016 – Present Member of Executive Committee and Board of Directors of Society for Freshwater Science.  
2014 – 2017 Hynes Award Subcommittee, Society for Freshwater Science, Chair 2016-2017  
2015 Review of student presentations, International Association for Great Lakes Research Annual Meeting  
2014 Special session co-organizer, "We've got a nitrogen fixation! Exploring, integrating, and understanding N fixation along the freshwater to marine continuum" with Drs. Robinson W. Fulweiler (Boston U), J. Thad Scott (U. Arkansas), and Jill Welter (St. Catherine U.), Joint Aquatic Sciences Meeting  
2013 IGNITE session co-organizer, "Where the Shovel Meets the Science: Reciprocal Learning Between Restoration and Ecology" with Dr. Casey Huckins, Ecological Society of America Annual Meeting

- 2006 – 2011 Conference session chair, North American Benthological Society Annual Meeting
- 2006 – 2011 Reviewer of student presentations, North American Benthological Society Annual Meeting
- 2010 Conference session chair, Association for the Sciences of Limnology and Oceanography

### **Outreach and Community Service**

- 2016 Presented university-wide results from the Great Lakes Restoration Initiative to Senator Debbie Stabenow during her visit to the Great Lakes Research Center
- 2014 Presented research results to Senator Carl Levin during his visit to the Great Lakes Research Center, along with Drs. C Huckins and P. Xue
- 2013 Trip Co-leader, *Ride the Waves with GM*, Great Lakes Research Center
- 2012 Guest Lecture, E. B. Holman Elementary School
- 2011 Guest Lecture, Stream Monitoring Teacher-Training Workshop, Western U.P. Center for Math, Science & Environmental Education
- 2007 Lecturer, Idaho State University Continuing Education, *The Portneuf River Perspective*
- 2003 – 2005 Member, Board of Directors and chair of science committee, Friends of Great Salt Lake, Salt Lake City, Utah.

### **Previous Service - Utah State University**

- 2004 – 2006 Co-chair and member, Ecology Center seminar speaker selection committee
- 2004 – 2005 Graduate Student Representative, Hydrologist hiring committee, Dept. of Watershed Science
- 2001 – 2003 Graduate Student Representative, Department of Watershed Science

### **Professional Development**

- 2010 – 2015 Center for Teaching and Learning luncheon workshops – 7 attended
- 2009 – 2012 Educational Technology seminars at Michigan Technological University – 4 attended
- 2011 Diversity-Literacy Training, Michigan Technological University
- 2011 Symposium participant, “Women Evolving Biological Sciences”, NSF Advance – University of Washington and University of California, Santa Cruz
- 2010 Participant – mentoring session for untenured faculty, Michigan Tech ADVANCE
- 2009 – 2010 Workshops by Sponsored Programs at Michigan Technological University – 4 attended
- 2008 Audited “Seminar in College Teaching”, Idaho State University

### **Honors and Awards**

- 2011 – 2016 Top 10% of instructors reviewed on campus, Michigan Technological University (5 semesters)
- 2011 Faculty of 1000 - Marcarelli et al. 2011 *Ecology* recommended as "Must read"
- 2010 Early Career Travel Award, American Society for Limnology and Oceanography
- 2009 Short-Term Postdoctoral Fellow, Japan Society for the Promotion of Science

- 2006 Terry Lynn Steel Award, College of Natural Resources, Utah State University  
2005 Outstanding Ph.D. Student, Department of Watershed Science, Utah State University  
2004 University Teaching Assistant of the Year finalist, Utah State University  
2004 Teaching Assistant of the Year, College of Natural Resources, Utah State University  
2004 President's Award, North American Benthological Society (NABS)  
2000 – 2003 Quinney Fellowship, Utah State University  
2000 Raymond J. Meyers Award, Biology Department, Colgate University  
2000 Phi Beta Kappa, national academic honor society  
1999 Research Fellowship, Department of Environmental Studies, Colgate University  
1999 Beta Beta Beta, national biological honor society  
1997 Phi Eta Sigma, academic honor society for first-year students

### **Advisors**

- Dr. Colden Baxter – Idaho State University  
Dr. Richard Inouye – Idaho State University (currently Utah State University)  
Dr. Wayne Wurtsbaugh – Utah State University (now Emeritus)  
Dr. Randall Fuller – Colgate University  
Dr. Ronald Hoham – Colgate University (now Emeritus)

### **Professional Affiliations**

- American Fisheries Society - Idaho Chapter, Michigan Chapter  
Association for the Sciences of Limnology and Oceanography  
Ecological Society of America  
Society for Freshwater Science (formerly North American Benthological Society)